Fast Facts on the planets for the teacher:

Mercury

- 0.387 Astronomical Units (AU) from the Sun (57,909,175 km)
- Diameter is 4,879 kilometers (km)
- Mass is 0.3302 x 10^{27} g
- Density is 5.43 gm/cm^3
- Surface gravity is 370 cm/s^2
- Average Surface Temperature is 440 K^0
- Surface features dominated by early crust formation and possibly early volcanism.
- Rotational period is 58.646 Earth days
- Orbital period is 0.2408 sidereal years
- No natural satellites
- No major atmospheric constituents

Venus

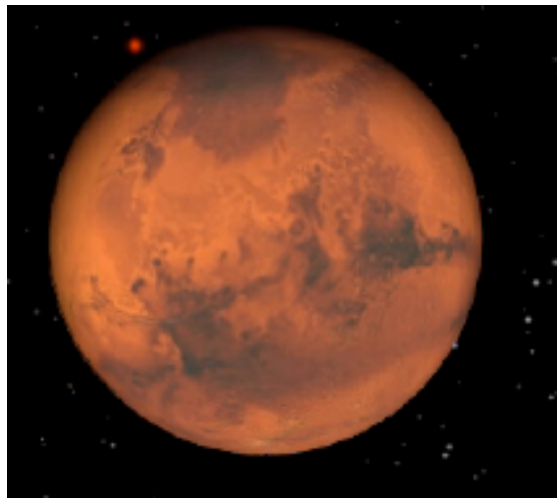
- 0.723 AU from the Sun (108,208,930 km)
- Diameter is 12,104 km
- Mass is 4.869 x 10^{27} g
- Density is 5.24 gm/cm^3
- Surface gravity is 887 cm/s^2
- Average Surface Temperature is 730 K^0
- Surface features dominated by volcanism
- Rotational period is -243.02 days retrograde. ("backwards" or spinning in the opposite direction of its orbit around the Sun)
- Orbital period is 0.6159 sidereal years
- No natural satellites
- Major atmospheric constituents include CO_2 and N_2

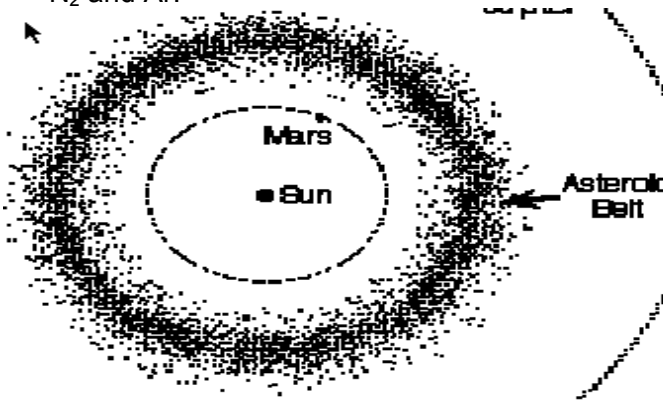
Earth

- 1.00 AU from the Sun (149,597,890 km)
- Diameter is 12,756 km
- Mass is 5.9742 x 10^{27} g
- Density is 5.515 gm/cm^3
- Surface gravity is 980 cm/s^2
- Average Surface temperature is 288-293 K^0
- Rotation period is 0.99726968 day
- Orbital period is 1.0000174 sidereal years
- Surface dominated by plate tectonics and volcanism.
- Earth has one natural satellite (moon).
- Major atmospheric constituents include N_2 and O_2

Mars

- 1.524 AU from the Sun (227,936,640 km)
- Diameter is 6794 km
- Mass is 0.6419 x 10^{27} g
- Density is 3.94 gm/cm^3
- Surface gravity is 371 cm/s^2
- Average Surface temperature is 186-268 K^0
- Rotation period is 1.02595675 days
- Orbital period is 1.8808476 sidereal years
- Surface dominated by early crustal formation, volcanism, later fluid erosion and transport
- Mars has two natural satellites which are probably two captured asteroids
- Major atmospheric constituents include CO_2, N_2 and Ar.



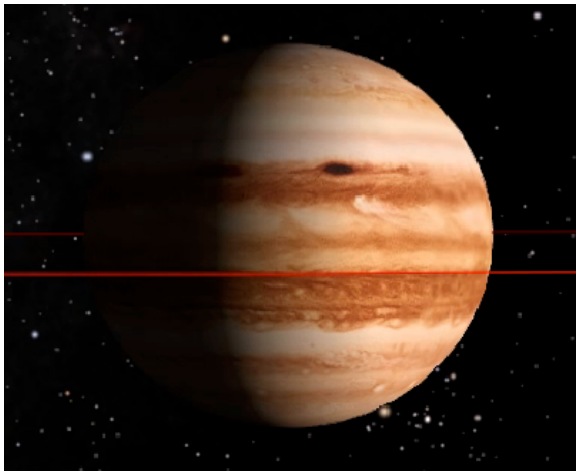


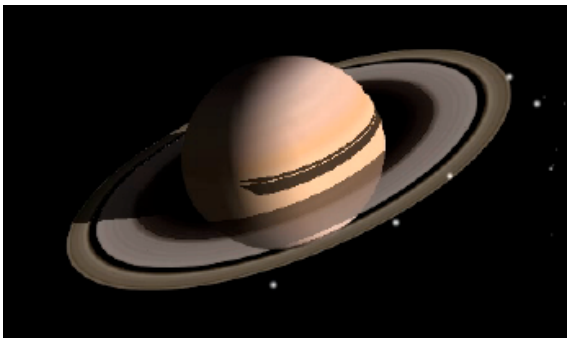
Main Asteroid Belt

- 2.7 AU from the Sun (403,914,300 km)
- largest asteroid is Vesta – composed of basalt
- second largest asteroid is Ceres – composed of ice and water

Jupiter

- 5.20336 AU from the Sun (778,412,010 km)
- Diameter is 142,948 km
- Mass is 1.898.7 x 10^{27} g
- Density is 1.33 gm/cm^3
- Surface gravity is 2312 cm/s^2
- Average Surface temperature is 288-293 K^0
- Rotation period is 0.41354 day
- Orbital period is 11.8626 sidereal years
- No surface as such, probably a rocky core
- Jupiter has sixty-one (61) natural satellites and counting, many are captured asteroids
- Major atmospheric constituents include H_2, and He.



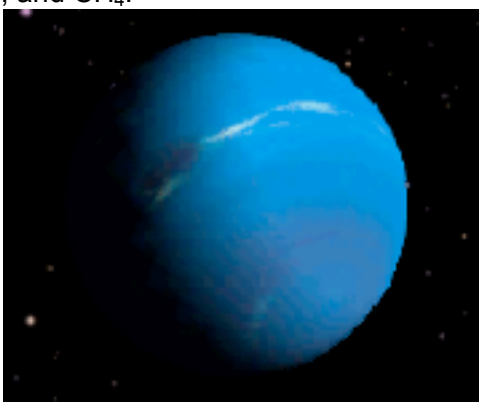


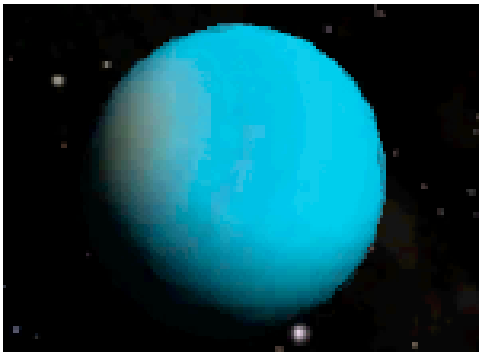
Saturn

- 9.537 AU from the Sun (1,426,725,400 km)
- Diameter is 120,536 km
- Mass is 568.51x 10^{27} g
- Density is 0.70 gm/cm^3
- Surface gravity is 896 cm/s^2
- Average Surface temperature is 134 K^0
- Rotation period is 0.44401 day
- Orbital period is 29.447498 sidereal years
- No surface as such, probably a rocky core
- Saturn has thirty-one (31) natural satellites and counting, many are captured asteroids; “Shepard” moons for rings
- Major atmospheric constituents include H_2, and He.

Uranus

- 19.191 AU from the Sun (2,870,972,200 km)
- Diameter is 51,118 km
- Mass is 86.849 x 10^{27} g
- Density is 1.30 gm/cm^3
- Surface gravity is 869 cm/s^2
- Average Surface temperature is 76 K^0
- Rotation period is -0.71833 day (retrograde)
- Orbital period is 84.0168 sidereal years
- No surface as such, probably a rocky core and ice
- Uranus has twenty (20) natural satellites and counting; coarse rings
- Major atmospheric constituents include H_2, He, and CH_4.



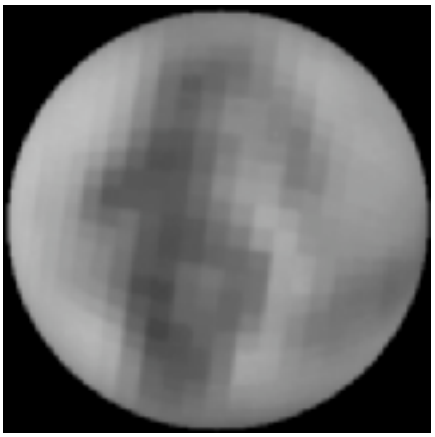


Neptune

- 30.06896 AU from the Sun (4,498,252,900 km)
- Diameter is 49,528 km
- Mass is 102.44 x 10^{27} g
- Density is 1.76 gm/cm^3
- Surface gravity is 1100 cm/s^2
- Average Surface temperature is 73 K^0
- Rotation period is 0.67125 day
- Orbital period is 164.79 sidereal years
- No surface as such, might have a rocky core and ice
- Neptune has eleven (11) natural satellites and counting; coarse rings
- Major atmospheric constituents include H_2, He, and CH_4.

Pluto

- 39.481686 AU from the Sun (5,906,376,200 km)
- Diameter is 2300 km
- Mass is 0.013 x 10^{27} g
- Density is 2.0 gm/cm^3
- Surface gravity is 60 cm/s^2
- Average Surface temperature is --
- Rotation period is –6.38718 day (retrograde)
- Orbital period is 247.92 sidereal years
- No surface as such, probably has a rocky core and ice
- Pluto has one (1) natural satellite - Charon
- Major atmospheric constituents unknown



Bibliography:

National Aeronautics and Space Administration, Sun to Earth Connection, 2003.
Thomsen, Michelle; The Sun, LASSO Presentation, 2003.
Elphic, Rick; Basic Tour of the Planets, LASSO Presentation, 3003.
Steinberg, John, LASSO Solar Wind Presentation, 2003.
Coronal Mass Ejections (CME):
McCaughrean, Geraldine, Greek Gods and Goddesses, Orchard Books, London, 1997.

Web sites:

http://www.theoi.com/Ouranos/Helios.html
http://wings.avkids.com/Book/Myth/advanced/chariot-01.html
http://sacred-texts.com/nam/mmp/mmp1.htm
http://www.windows.ucar.edu/tour/link=/mythology/huitzilopochtli_Sun.html
http://www.angelfire.com/ns/express/aztec.html
http://mythome.org/ldls.html